

REMARKS/ARGUMENTS

Claims 18 and 21-25 are pending, and claims 1-17 and 19-20 were previously cancelled without prejudice. In the present Response, no claim amendments are made. A claim listing, while not required, is provided for convenience.

Rejections under 35 U.S.C. §102(e)

The Examiner rejected claims 18 and 21-25 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. ("Hohl"). Reconsideration of the rejection is respectfully requested.

Hohl discloses an engine 20 including a cylinder head 21 and an engine block 22. A coolant inlet 23 leads into the engine block 22, and the coolant outlet 24 and an additional coolant outlet 25 lead back into the cylinder head 21. As indicated by the arrows in the figures of Hohl, coolant is supplied to the engine block 22 through the coolant inlet 23. The coolant is then supplied from the engine block 22 to the cylinder head 21.

In Hohl, the coolant can be used to cool and can thus be heated by one or more units 60, 70, 80 to be cooled, such as, a starter generator, a power electronics circuit, and an oil cooler, respectively. The coolant thus heated can be supplied to the engine block 22 through the coolant inlet 23.

Independent Claim 18

Independent claim 18 defines a system for regulating a heat balance of a vehicle, said vehicle comprising a passenger compartment, an engine, said engine comprising a cylinder head and engine block, a coolant circuit for dissipating heat generated in said engine, said coolant circuit comprising: at least one coolant pump for circulating a coolant through said coolant circuit, a cooling circuit for cooling said coolant in a cooler by ambient air and a heating circuit for heating said passenger compartment with said coolant, a heat exchanger (20), said heat exchanger (20) being a source of waste heat, said heat exchanger (20) being operatively associated with an air conditioner of said vehicle, means for transferring said waste heat from said heat exchanger (20) to said coolant in said coolant circuit, said at least one coolant pump for pumping said coolant directly into said cylinder head and engine block and then into said heating circuit during engine warm-up.

Hohl does not teach or suggest, among other things, a system for regulating a heat balance of a vehicle including at least one coolant pump for pumping said coolant directly into said cylinder head and engine block and then into said heating circuit during engine warm-up. Rather, Hohl discloses that coolant is pumped into the engine block 22 through the coolant inlet 23 and then to the cylinder block 21. In Hohl, coolant is not pumped directly into the cylinder block 21.

In addition, Hohl does not teach or suggest a heat exchanger (20), the heat exchanger (20) being a source of waste heat, the heat exchanger (20) being operatively associated with an air conditioner of the vehicle, and means for transferring said waste heat from said heat exchanger (20) to said coolant in said coolant circuit. Rather, Hohl discloses one or more units 60, 70, 80 to be cooled, such as, a starter generator, a power electronics circuit, and an oil cooler, respectively, and that coolant heated by the unit(s) 60, 70, 80 may be supplied to the engine block 22 through the coolant inlet 23.

For at least these independent reasons, Hohl does not teach or suggest each and every element of independent claim 18. Accordingly, independent claim 18 is allowable. Dependent claims 21-23 depend from independent claim 18 and are allowable for at least the same and other independent reasons.

Independent Claim 24

Independent claim 24 defines a method for regulating a heat balance of a vehicle, said vehicle including a passenger compartment, an engine, said engine including a cylinder head and engine block, a coolant circuit for dissipating heat generated in said engine, said coolant circuit including at least one coolant pump for circulating a coolant through said coolant circuit, a cooling circuit for cooling said coolant in a cooler by ambient air and a heating circuit for heating said passenger compartment with said coolant, a heat exchanger (20), said heat exchanger (20) being a source of waste heat, the heat exchanger (20) being operatively associated with an air conditioner of the vehicle, said method comprising transferring said waste heat from said heat exchanger (20) to said coolant in said coolant circuit, and during engine warm-up, pumping said coolant in said coolant circuit directly into said cylinder head and engine block and then into said heating circuit.

Hohl does not teach or suggest, among other things, a method for regulating a heat balance of a vehicle including, during engine warm-up, pumping said coolant in said coolant circuit directly into said cylinder head and engine block and then into said heating circuit. Rather, Hohl discloses that coolant is pumped into the engine block 22 through the coolant inlet 23 and then to the cylinder block 21. In Hohl, coolant is not pumped directly into the cylinder block 21.

In addition, Hohl does not teach or suggest a heat exchanger (20), said heat exchanger (20) being a source of waste heat, the heat exchanger (20) being operatively associated with an air conditioner of the vehicle, and the method including transferring said waste heat from said heat exchanger (20) to said coolant in said coolant circuit. Rather, Hohl discloses one or more units 60, 70, 80 to be cooled, such as, a starter generator, a power electronics circuit, and an oil cooler, respectively, and that coolant heated by the unit(s) 60, 70, 80 may be supplied to the engine block 22 through the coolant inlet 23.

For at least these independent reasons, Hohl does not teach or suggest each and every element of independent claim 24. Accordingly, independent claim 24 is allowable. Dependent claim 25 depends from independent claim 24 and is allowable for at least the same and other independent reasons.

CONCLUSION

In view of the foregoing, entry of the present Response and allowance of claims 18 and 21-25 are respectfully requested.

If additional consultation with Applicants' attorney will further prosecution, the undersigned is available during normal business hours at the below-identified telephone number.

Respectfully submitted,

/Edward R. Lawson Jr./

Edward R. Lawson Jr.
Reg. No. 41,931

Docket No. 022862-1054-00
Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Suite 3300
Milwaukee, Wisconsin 53202-4108
414.271.6560